June 2010
SJCOG Board

# STAFF REPORT

**SUBJECT:** Senate Bill 375 (SB-375) Target Setting

**RECOMMENDED ACTION:** Discussion

## BACKGROUND:

Senate Bill 375 (SB-375) requires metropolitan planning organizations (MPO) to develop, if feasible, Sustainable Community Strategies (SCS) to help further the goals of Assembly Bill 32 (AB-32) to reduce greenhouse gas emissions statewide to 1990 levels by 2020. Unlike AB-32, SB-375 focuses only on the connection between land use and transportation, rather than all greenhouse gas emitting sectors.

The SCS, as defined in SB-375, requires MPOs, if feasible, to develop a planning scenario designed to achieve certain goals for the reduction of greenhouse gas emissions from passenger automobiles. Because there are currently no "targets" for the reduction of greenhouse gas emissions established in the AB-32 Scoping Plan (the California Air Resources' plan to reduce greenhouse gas emissions to 1990 levels by 2020), SB-375 establishes a process in which the California Air Resources Board (ARB) is responsible for the development and adoption of greenhouse gas emissions targets for the 18 MPOs of the state.

To develop greenhouse gas emissions reductions targets for the 18 MPOs of the state, SB-375 required ARB to appoint a Regional Target Advisory Committee (RTAC) that was charged with recommending factors and methodologies for setting greenhouse gas emissions reductions targets. Andrew Chesley was appointed to serve on this committee.

In September 2009, the RTAC released its recommendation regarding the factors and methodologies for setting greenhouse gas targets. The report documenting the RTAC's recommendation can be found online at the following address:

http://www.arb.ca.gov/cc/sb375/rtac/report/092909/finalreport.pdf. The RTAC recommended ARB follow a seven step approach when setting greenhouse gas emissions reduction targets. The RTAC also stressed to ARB the importance of working with the MPOs during the target setting process. The RTAC's seven step approach to target setting is outlined below:

Step 1
MPOs develop baseline greenhouse gas emissions data for the years, 2005, 2020, and 2035.

Step 2
ARB uses the results from Step 1 to compile greenhouse gas emission estimates for each of the MPOs individually in the base year of 2005 and the target years of 2020 and 2035. This results in

a greenhouse gas emissions "baseline" against which further reductions from regional strategies developed in Step 3 and 4 can be compared.

Step 3
Using a bottom up approach with input from regional and local officials and stakeholders, the MPOs would work with ARB to develop parameters for preparing sensitivity analyses and multiple scenarios to test the effectiveness of various approaches that would help identify the most ambitious achievable greenhouse gas emission reduction strategies for 2020 and 2035. ARB and MPOs are encouraged to coordinate and develop comparable packages across the regions.

Step 4
MPOs analyze the alternative scenarios and forward the results to ARB. ARB would compile the results, and, combined with ARB's review of empirical studies and other relevant information that relates to passenger automobile greenhouse gas emissions (including new auto fuel efficiency standards and clean fuels), prepare a preliminary draft uniform statewide target for public review and comment.

At this time, an MPO may also submit a proposed regional target pursuant to provisions of SB 375.

Step 5
ARB considers feedback from MPOs and other stakeholders on the preliminary draft uniform statewide target, as well as any formal regional target submittals received as part of Step 4, to assess whether any region's target should be adjusted either above or below the preliminary draft uniform statewide target.

Step 6
ARB staff recommends draft targets to its Board in June 2010.

Step 7
ARB, MPOs and others continue to exchange technical information and modeling results prior to ARB's final target setting in September 2010.

The RTAC recommendation also identified the metric which greenhouse gas emissions are to be measured. That metric is a percent per capita reduction from 2005.

## DISCUSSION:

Following the RTAC recommendation in September 2009, SJCOG staff began participation in a group of the state's MPOs, ARB and Caltrans to begin implementation of the RTAC's seven step approach to greenhouse gas emissions reductions target setting. ARB indicated early in the process that technical assistance would be necessary from each of the MPOs to help ARB understand the characteristics of each of the state's 18 MPO regions. ARB recognized early in the process that an accurate measurement of vehicle miles travelled within each region was crucial to the success of SB-375 implementation and placed emphasis on the importance of MPO participation in the target setting process. In the State of California it is the MPO, not ARB that develops and maintains regional traffic models that produce regional estimates of vehicle miles

travelled. Due to this fact, ARB relies heavily on information received from MPOs in the development of regional greenhouse gas emissions targets.

ARB also recognized that absent participation from the MPOs in the scenario development process (steps 3 and 4 above) ARB would be forced to rely on data from existing scenario planning processes such as Blueprint or data received from other MPOs to develop scenarios for those MPOs not participating in the scenario development process. Although ARB is the agency responsible for the adoption of greenhouse gas reduction targets, ARB has indicated a strong desire for a bottom up approach which relies heavily on analyses developed by MPOs working with local jurisdictions within their regions.

SJCOG Target Setting Process

**Baseline Development:**

SJCOG staff utilized the SJCOG transportation model and ARB's Emissions Factor 2007 (EMFAC2007) model to develop greenhouse gas emissions estimates for 2005, 2020, and 2035 based on the September 2009, RTAC recommendation. San Joaquin County draft baseline greenhouse gas emissions estimates from passenger vehicles can be found in the table below.

| | **2005** | **2020** | **2035** |
|---|---|---|---|
| **Population (people)**[1] | 650,458 | 809,685 | 989,774 |
| **Total Passenger Car Greenhouse Gas ($CO_2$) Emissions (lbs)** | 11,187,878 lbs | 13,440,771 lbs | 16,826,158 lbs |
| **Baseline Passenger Car Greenhouse Gas ($CO_2$) Emissions Per Capita (lbs)** | 17.2 lbs per capita | 16.6 lbs per capita | 17.0 pounds per capita |

*Numbers reflected in this table are estimates based on current ARB methodologies and are subject to change with ARB changes to methodology to calculate vehicle miles travelled.

**Scenario Development:**

SJCOG staff has developed greenhouse gas reduction scenarios for the years 2020 and 2035. To develop these scenarios, SJCOG staff began with the same data sets utilized as part of the Blueprint process. These data sets include: location of agricultural land, critical habitat, green belts, California Natural Diversity Database, Delta, Highway 88 area, general plans, and access to regional transportation plan projects, census block groups with residential growth, city boundaries, existing urban areas, and existing roadways. SJCOG staff worked with the local jurisdictions to understand planned growth within existing general plans or planned updates as well as general plan policies that may be beneficial to the reduction of greenhouse gas emissions. SJCOG staff also requested information regarding the development of climate action plans within any of the local jurisdictions that have been or will be incorporated into general plans.

[1] SJCOG Board adoption November 2009

SJCOG staff created a scenario based on input from the local jurisdictions that resulted in a countywide average density of approximately 3.88 dwelling units per acre in 2020 and approximately 4.73 dwelling units per acre in 2035. Both scenarios represent an increase in density from the current 3.23 dwelling units per acre.

SJCOG staff presented the 2020 and 2035 scenario results to the San Joaquin Planners group and received favorable input.

The results of the 2020 and 2035 scenario are displayed in the table below.

| | **2020** | **% Per Capita Reduction from 2005** | **2035** | **% Per Capita Reduction from 2005** |
|---|---|---|---|---|
| **Scenario Passenger Greenhouse Gas Emissions Per Capita** | 16.17 lbs per capita | 6% | 16.51 lbs per capita | 4% |

When comparing the SJCOG 2020 and 2035 scenario to scenarios developed by other MPO regions of the state, the SJCOG scenario is less aggressive than the state's large 4 MPOs whose scenarios represent a range from 7 to 15% reduction per capita (Sacramento Area Council of Governments, Southern California Association of Governments, Metropolitan Transportation Commission, and San Diego Association of Governments) mainly due to the impact of roadway pricing assumptions contained in their scenarios. The SJCOG scenario does however fall into a range similar to other medium size MPOs throughout the state (1 to 5% per capita reduction from 2005). When compared to other MPOs in the San Joaquin Valley, the SJCOG scenario again falls within the middle of the range. The preliminary scenarios developed by Fresno COG result in approximately a 5% reduction from 2005 and the preliminary scenarios developed by KernCOG result in a 9% increase from 2005.

ARB has given preliminary indication that the ARB final SB-375 targets will not reflect a percent per capita growth in greenhouse gas emissions.

**Next Steps:**

- June 2010: Submit planning scenarios to ARB and ARB release of draft greenhouse gas emissions targets
- June 2010 through September 2010: ARB public process covering draft greenhouse gas emissions targets
- September 2010: ARB Board approval of final greenhouse gas emissions reductions targets.
- September 2010 through Spring 2014: SCS scenario development and 2014 RTP development

In December 2008, the ARB board identified a desire to have the most ambitious achievable target for each of the state's 18 MPOs with the adoption of the AB-32 Scoping plan, however, stopped short of defining the term "ambitious achievable". ARB staff has worked with the MPOs leading up to the June 2010 draft target release to define what is the most ambitious achievable target for each MPO region. During the period between June 2010 and September 2010, SJCOG staff will continue to follow the ARB target setting process as it is during this timeframe, the ARB constituent groups will provide comments regarding the ambitiousness of the ARB June 2010 draft target for each MPO region. It is during this timeframe, the definition of what is an ambitious achievable target for each MPO region will be challenged. SJCOG staff will continue to work with ARB staff to continue the education process of what is an ambitious achievable target in the SJCOG region; however, it is important to place emphasis on the fact that ARB is the agency that will adopt the final greenhouse gas emissions reduction target. SJCOG staff only provides input into the process.

Once the ARB board approves final targets, SJCOG will begin working with the local jurisdictions in the development of a Sustainable Communities Strategy in coordination with the 2014 RTP.

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